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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2008; month=7; day=17; hr=15; min=19; sec=55; ms=898; ]

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\*\*\*\*\*

Reviewer Comments:

210> 17

<211> 69

<212> DNA

<213> modified E. coli thermostable enterotoxin II signal sequence

\* \* \* \* \*

Numeric identifier <213> can only be one of three choices, "Scientific name, i.e. Genus/species, Unknown or Artificial Sequence." SEQ ID # 24 has this same error.

numeric identifier <160> indicates there are 36 sequences in this sequence listing, "<160> 36." The actual number counted is 35 sequences. Please make all necessary changes to correct this error.

\*\*\*\*\*

Application No: 10576068 Version No: 2.0

**Input Set:****Output Set:**

**Started:** 2008-06-18 15:56:48.933  
**Finished:** 2008-06-18 15:56:50.717  
**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 784 ms  
**Total Warnings:** 35  
**Total Errors:** 1  
**No. of SeqIDs Defined:** 36  
**Actual SeqID Count:** 35

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2008-06-18 15:56:48.933  
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**Actual SeqID Count:** 35

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (21) This error has occurred more than 20 times, will not be displayed
W 402	Undefined organism found in <213> in SEQ ID (24)
E 252	Calc# of Seq. differs from actual; 36 seqIds defined; count=35

# SEQUENCE LISTINGS

<110> Hanmi Pharm. Co., Ltd.

<120> EXPRESSION VECTOR FOR SECRETING ANTIBODY FRAGMENT USING E. COLI  
SIGNAL SEQUENCE AND METHOD FOR MASS-PRODUCING ANTIBODY FRAGMENT

<130> Q94300

<140> 10576068

<141> 2008-06-18

<150> KR1020030072216

<151> 2003-10-16

<150> PCT/KR04/02625

<151> 2004-10-14

<160> 36

<170> KopatentIn 1.71

<210> 1

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> gene fragment of light chain variable region

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<211> 80

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<213> Artificial Sequence

<220>

<223> gene fragment of light chain variable region

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<210> 3

<211> 80

<212> DNA

<213> Artificial Sequence

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 <223> gene fragment of light chain variable region

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<210> 4  
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 <213> Artificial Sequence

<220>  
 <223> gene fragment of light chain variable region

<400> 4  
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<210> 5  
 <211> 80  
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 <223> gene fragment of light chain variable region

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<210> 6  
 <211> 41  
 <212> DNA  
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<223> gene fragment of heavy chain variable region

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<210> 8

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<213> Artificial Sequence

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<223> gene fragment of heavy chain variable region

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gagtctcagg gacctgccg 79

<210> 9

<211> 80

<212> DNA

<213> Artificial Sequence

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<223> gene fragment of heavy chain variable region

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atagtgtca catagactat 80

<210> 10

<211> 80

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<213> Artificial Sequence

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<223> gene fragment of heavy chain variable region

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atagtctatg tgaccactat 80

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 <223> RT-PCR forward primer specific for heavy chain  
  
  
 <400> 13  
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 <210> 14  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> RT-PCR reverse primer specific for heavy chain  
  
  
 <400> 14  
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 <210> 15

<211> 42  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> RT-PCR forward primer specific for light chain  
  
  
 <400> 15  
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 <210> 16  
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 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> RT-PCR reverse primer specific for light chain  
  
  
 <400> 16  
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 <210> 17  
 <211> 69  
 <212> DNA  
 <213> modified E. coli thermostable enterotoxin II signal sequence  
  
 <400> 17  
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 <210> 18  
 <211> 45  
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 <213> Artificial Sequence  
  
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 <223> forward primer containing StuI restriction enzyme site  
  
  
 <400> 18  
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 <210> 19  
 <211> 45  
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 <213> Artificial Sequence  
  
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 <223> reverse primer containing StuI restriction enzyme site



<400> 19  
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<210> 20  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> reverse primer specific for light chain

<400> 20  
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<210> 21  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer containing SD sequence and BamHI restriction enzyme site

<400> 21  
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<210> 22  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer containing BpuI restriction enzyme site

<400> 22  
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<210> 23  
 <211> 52  
 <212> DNA  
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<220>  
 <223> reverse primer containing BpuI restriction enzyme site

<400> 23  
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<210> 24  
 <211> 63  
 <212> DNA  
 <213> E. coli OmpA signal sequence

<400> 24  
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 gct 63

<210> 25  
 <211> 30  
 <212> DNA  
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<220>  
 <223> forward primer specific for heavy chain

<400> 25  
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<210> 26  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer containing HindIII and StuI restriction enzyme sites

<400> 26  
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<210> 27  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> reverse primer containing stop codon and BamHI restriction enzyme site

<400> 27  
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<210> 28  
 <211> 42  
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 <213> Artificial Sequence

<220>

<223> forward primer containing HindIII and NruI restriction enzyme sites

<400> 28  
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<210> 29  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>

<223> reverse primer containing stop codon and BamHI restriction enzyme site

<400> 29  
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<210> 30  
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<212> DNA  
<213> Artificial Sequence

<220>

<223> reverse primer containing SalI restriction enzyme site

<400> 30  
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<210> 31  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>

<223> forward primer specific for modified E. coli enterotoxin II signal peptide and containing NdeI restriction enzyme site

<400> 31  
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<210> 32  
<211> 705  
<212> DNA  
<213> Artificial Sequence

<220>

<223> TNF-alpha heavy chain

<400> 32

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ccaggaaggg gcctggaatg ggtctcagct atcacttggg atagtgggtca catagactat 180  
gcggactctg tggaggggccc attcaccatc tccagagaca acgccaagaa ctccctgtat 240  
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agtgcctcca ccaagggccc atcgggtcttc cccctggcac cctcctccaa gagcacctct 420  
gggggcacag cgccctggg ctgcctgggc aaggactact tccccgaacc ggtgacgggtg 480  
tcgtggaact caggcgccct gaccagcggc gtgcacacct tcccggctgt cctacagtcc 540  
tcaggactct actcctcag cagcgtgggt accgtgccct ccagcagctt gggcaccag 600  
acctacatct gcaacgtgaa tcacaagccc agcaacacca aggtggacaa gaaagttgag 660  
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<210> 33

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<223> TNF-alpha light chain

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gggaaagccc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180  
cggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag cctacagcct 240  
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gggaccaagg tggaatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcga 360  
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cccagagagg ccaaagtaca gtggaagggt gataacgccc tccaatcggg taactcccag 480  
gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600

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<210> 34

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Recombinant light chain of TNF-alpha Fab'

<400> 34

Asp Ile Gln Met Thr Gln Ser

1 5

<210> 35

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Recombinant heavy chain of TNF-alpha Fab'

<400> 35

Glu Val Gln Leu Glu Val Asp Ser

1 5